

METHOD FOR CREATION OF SECURE SIMULATION MODELS

ABSTRACT

5 Method and apparatus for security systems are provided to protect electronic
designs from unauthorized usage. An obfuscation system is provided for creating
secure simulation models of IP cores that allow efficient evaluation of an electronic
design incorporating an IP core but do not allow practical implementation of the IP
core. The obfuscation system identifies regions for obfuscation within an IP core.
10 Logic obfuscation is inserted into these regions. Examples of obfuscation include
additional circuitry that produces time dilatation, space dilatation, or a combination of
the two in the circuitry of an IP core. Typically, the inserted obfuscation does not
change the ultimate behavior of the internal signals, but is complicated enough to
make an electronic design so slow and/or so large that it cannot be implemented
15 practically. Further, the inserted obfuscation should be of a type is not normally
removed by that normal logic optimizations such as synthesis.